AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

LISTING OF CLAIMS:

1. (**currently amended**): An image processing apparatus comprising a processing unit which, in a pair of images formed to generate a difference corresponding to a parallax of both eyes, performs a process of reducing a difference of at least one of the pair of images other than a geometric difference between image structures corresponding to the parallax of both eyes;

wherein the difference other than the geometric difference between the image structures corresponding to the parallax of both eyes is a difference between noise components superposed on the pair of images; and

wherein the reducing a difference between noise components superposed on the pair of images comprises using a least-squares method, the least-squares method determining a minimum residual between an average data function plus a constant for the one of the pair of images and a data function at a particular pixel of one of the pair of images, and setting the particular pixel to have the value of the average data function plus the constant in the one of the pair of images.

2. (previously presented): An image processing apparatus according to claim 1, wherein the pair of images are still images picked from a pair of video images formed to generate a difference corresponding to a parallax of both eyes.

3-6. (canceled).

7. (previously presented): An image processing apparatus according to claim 1, further comprising a recognition unit which recognizes the geometric difference between image structures corresponding to the parallax of both eyes in the pair of images, wherein

the processing unit performs a process of reducing a difference other than the geometric difference between the image structures recognized by the recognition unit in the pair of images.

8. (previously presented): An image processing apparatus according to claim 7, wherein the recognition unit recognizes the geometric difference between the image structures corresponding to the parallax of both eyes by performing matching between the pair of images.

9. (previously presented): An image processing apparatus according to claim 1, wherein the processing unit performs, as the process of reducing the difference other than the geometric difference between the image structures, at least one of a process of removing a noise component superposed on only one of the pair of images from the one image or a process of correcting at least one of the pair of images to eliminate or reduce a difference between noise components which are different from each other and superposed on corresponding regions on the pair of images.

10. (previously presented): An image processing apparatus according to claim 7, wherein the processing unit divides the pair of images into sectional regions, determines a sectional region of the other image corresponding to a specific sectional region in the one image based on the geometric difference between image structures in the pair of images recognized by

the recognition unit, and compares the sectional regions determined to be corresponding regions with each other for the respective sectional regions, so that a noise component which causes the difference other than the geometric difference between the image structures is determined.

11. (previously presented): An image processing apparatus according to claim 9, wherein the processing unit averages the noise components which are different from each other and superposed on the corresponding regions on the pair of images, and corrects at least one of the pair of images based on the averaged noise component.

12. (previously presented): An image processing apparatus according to claim 1, wherein the pair of images are digital images obtained by photographing the same scene by a plurality of image pickup devices, relative positions of which are adjusted to generate the difference corresponding to a parallax of both eyes, or by photographing the same scene at a plurality of positions to which a single image pickup device is sequentially moved to generate the difference corresponding to a parallax of both eyes.

13. (**currently amended**): An image processing method of performing a process of reducing a difference of at least one of the pair of images other than a geometric difference between image structures corresponding to a parallax of both eyes in a pair of images formed to generate a difference corresponding to a parallax of both eyes;

wherein the difference other than the geometric difference between the image structures corresponding to the parallax of both eyes is a difference between noise components superposed on the pair of images; and

wherein the reducing a difference between noise components superposed on the pair of images comprises using a least-squares method, the least-squares method determining a minimum residual between an average data function plus a constant for the one of the pair of images and a data function at a particular pixel of one of the pair of images, and setting the particular pixel to have the value of the average data function plus the constant in the one of the pair of images.

14. (**currently amended**): A computer readable storage medium which stores a computer program for causing a computer to function as a processing unit which, in a pair of images formed to generate a difference corresponding to a parallax of both eyes, performs a process of reducing a difference of at least one of the pair of images other than a geometric difference between image structures corresponding to the parallax of both eyes;

wherein the difference other than the geometric difference between the image structures corresponding to the parallax of both eyes is a difference between noise components superposed on the pair of images; and

wherein the reducing a difference between noise components superposed on the pair of images comprises using a least-squares method, the least-squares method determining a minimum residual between an average data function plus a constant for the one of the pair of images and a data function at a particular pixel of one of the pair of images, and setting the particular pixel to have the value of the average data function plus the constant in the one of the pair of images.

15. (previously presented): An image processing apparatus according to claim 1, wherein the reducing a difference reduces a difference between image structures corresponding to the parallax of both eyes which is not a geometric difference.

16. (previously presented): An image processing apparatus according to claim 1, wherein the reducing difference between noise components superposed on the pair of images comprises:

determining an averaged noise component for the pair of images; and

correcting the noise component in each image of the pair of images according to the averaged noise component.

17. (canceled).

18. (previously presented): An image processing method according to claim 13, wherein the reducing difference between noise components superposed on the pair of images comprises:

determining an averaged noise component for the pair of images; and

correcting the noise component in each image of the pair of images according to the averaged noise component.

19. (previously presented): An image processing method according to claim 13, wherein the difference other than the geometric difference between the image structures corresponding to the parallax of both eyes is a difference between colors in the pair of images.

20. (new): An image processing apparatus according to claim 1, wherein the pair of images comprises a left image and a right image, and the process for reducing the difference of at least one of the pair of images further comprises:

sectioning each of the left image and right image into a plurality of process blocks, wherein the process blocks of the left image correspond to the process blocks of the right image, and each process block for the left image and each process block for the right image comprising a plurality of pixels;

calculating an average data function for one of the plurality of process blocks of the left image and the corresponding one of the plurality of process blocks for the right image;

calculating a constant using the least squares method to minimize residual between the average data function plus the constant and a data function at each of a particular pixel contained the process block of left image and the corresponding pixel contained within the process block of the right image;

setting the data function at the particular pixel of the process block of the left image to equal the average data function plus the constant calculated for the process block of the left image;

setting the data function at the particular pixel of the corresponding process block of the right image to equal the average data function plus the constant calculated for the process block of the right image; and

repeating the operations for each of the remaining process blocks of the left image and right image.

21. (new): An image processing apparatus according to claim 20, wherein the average data function is calculated according to the following equation:

$$f\,ave(j) = \frac{1}{2n} \cdot \left(\sum_{i=1}^{n} data_L(i, j) + \sum_{i=1}^{n} data_R(i, j) \right)$$

where, $data_L$ (i, j) is the pixel at the ith row and the jth column in one of the process blocks of the left image, $data_R$ (i, j)is the pixel at the ith row and the jth column in one of the process block of the right image, and n is the total number of pixels in the process block for the left image and right image.